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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,929	11/14/2003	Gopi Venkatesh	451194-101	4820

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EXAMINER	
VANIK, DAVID L	

ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/713,929	VENKATESH ET AL.	
	Examiner	Art Unit	
	David L. Vanik	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 23* is/are pending in the application.

4a) Of the above claim(s) *23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6-9 and 11* is/are rejected.

7)☐ Claim(s) *3-5 and 10* is/are objected to.

8)☒ Claim(s) *23* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of the Applicant's Amended Claims and Remarks filed on 10/18/2005.

As a result of Applicant's Amended Claims, The *35 USC §102* rejections over US Patents 5,407,696 ('696) and WO 99/12524 ('524) are hereby **withdrawn**. The *35 USC §102* rejections over US Patent 4,839,177 ('177) is hereby **maintained**.

Election/Restrictions

Newly submitted claim 23 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The use of the language "consisting essentially of" materially alters the search associated with this application.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 23 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

MAINTAINED OBJECTIONS:

The following is a list of maintained objections:

Claim Objections

Claims 1 and 5, are objected to because of the following informalities: According to MPEP 608.01, material in parenthesis is only proper when referring to elements in a figure. Appropriate correction is required.

Response to Arguments

Applicant's arguments filed on 10/18/2005 have been fully considered but they are not persuasive. In response to the 7/18/2005 Non-Final Rejection, Applicant has asserted the use of parenthesis increases the clarity of the claims. The examiner respectfully disagrees with this assertion.

It is the examiner's position that the use of "ER" and "IR" in the instant claims 1 and 5 does not increase the clarity of the claims. The examiner suggests that "ER" and "IR" be removed and substituted with the phrases "extended release" and immediate release." With respect to claims 3-4, the examiner agrees with Applicant that the use of parenthesis increases the clarity of the claims. Appropriate correction is required.

MAINTAINED REJECTIONS:

The following is a list of maintained rejections:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 6-9, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,839,177 ('177).

'177 disclose a controlled drug release system comprising the following: (1) a deposit core comprising an active substance and (2) a support platform coating applied to said deposit core (abstract). It is the examiner's position that the deposit core of the composition advanced by '177 is an immediate-release type. According to '177, the support platform or coating consists of a polymeric material that is insoluble in aqueous liquids (abstract and Figure 1). Materials suitable for preparing the support platform include celluloses, such as ethyl cellulose, and acrylates, such as cellulose acetate-propionate and methacrylates (column 3, lines 3-12 and column 8, lines 57-62). Plasticizers, such as castor oil, and water-soluble polymers, such as hydroxypropylcellulose, can also be added to the support platform (column 8, lines 57-62 and column 2, lines 44-58). The active agent employed in the deposit core can be diazepam, a well-known muscle relaxant (column 8, line 23). It should be noted that the

use of the composition for the treatment of muscle spasms is considered to be a future intended use of the composition and, as such, is not given patentable weight.

The extended-release composition advanced by '177 has a release rate of 33% after 2 hours and 62% after 4 hours (column 9, lines 8-16). This rate of release falls within the range of the instant claim 1. It is the examiner's position that, inherently, the composition advanced by '177 provides a release of 60-85% after 8 hours and 75-85% after 12 hours. Since the essential elements of the '177 composition are identical to the instant compositions (that is, an extended release capsule comprising a muscle relaxant, diazepam, coated with an insoluble polymer), the composition would inherently have the same physiochemical properties as the compositions set forth in the instant application. As such, it is the examiner's position that the composition advanced by '177 anticipates the compositions enumerated in the instant claim set.

The claims are therefore anticipated by US Patent 4,839,177 ('177).

Response to Arguments

Applicant's arguments filed on 10/18/2005 have been fully considered but they are not persuasive. In response to the 7/18/2005 Non-Final Rejection, Applicant has asserted that the '177 patent does not disclose "multi-particulate" pharmaceutical dosage forms. Additionally, it is Applicant's assertion that '177 does not teach a composition comprising an immediate-release core and an extended-release portion. The examiner respectfully disagrees with these assertions.

Giving the instant claim set the broadest reasonable interpretation, it is the examiner's position that '177 teaches a multi-particulate form. Specifically, the composition comprises a plurality of "granulates" that can be interpreted as being tantamount to particulates (Example 3). This point is strengthened by the fact that '177 makes reference to controlled-rate release particles in the instant specification (column 2, lines 5-9).

As stated above, absent a showing to the contrary, the examiner is interpreting the deposit core of the composition advanced by '177 to be an immediate-release type. That is, without the presence of the polymer-based support platform or coating, the active agent would be immediately released from the core. With respect to the coating, it is the examiner's position that it is an extended-release portion. Like the instant application, the composition advanced by '177 has a release rate of 33% after 2 hours and 62% after 4 hours (column 9, lines 8-16). As such, it is the examiner's position that this can be considered to be an extended-release portion.

NEW REJECTIONS:

The following is a list of new rejections:

Claim Rejections - 35 USC § 112

Independent claim 1 is rejected and dependent claims 2-11 are objected to under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the newly added term "multi-particulate" refers to either the immediate release or the extended release portions of the pharmaceutical dosage form. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Independent claim 1 is rejected and dependent claims 2-11 are objected to under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the following drug release profile with the drug **cyclobenzaprine hydrochloride**, does not reasonably provide enablement for the generic class of muscle relaxants. The following is the drug release profile set forth in the instant application:

> after 2 hours, no more than about 40% of the total active is released;
>
> after 4 hours, from about 40-65% of the total active is released
>
> after 8 hours, from about 60-85% of the total active is released; and
>
> after 12 hours, from about 75- 85% of the total active is released

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

Enablement is considered in view of the Wands factors (MPEP 2164.01 (a)). These include: breadth of the claims; nature of the invention; state of the prior art; amount of direction provided by the inventor; the level of predictability in the art; the existence of working examples; quantity of experimentation needed to make or use the invention based on the content of the disclosure; and relative skill in the art. All of the factors have been considered with regard to the claim, with the most relevant factors discussed below:

The breadth of claims: Claim 1 is drawn to a composition comprising two portions: 1) an immediate-release portion comprising a skeletal muscle relaxant and 2) an extended-release coating. The dosage form has the following drug release profile:

after 2 hours, no more than about 40% of the total active is released;

after 4 hours, from about 40-65% of the total active is released

after 8 hours, from about 60-85% of the total active is released; and

after 12 hours, from about 75- 85% of the total active is released

The nature of the invention: The invention is drawn to a composition comprising two portions: 1) an immediate-release portion comprising **cyclobenzaprine**

hydrochloride and 2) an extended-release coating. The dosage form has the following drug release profile:

> after 2 hours, no more than about 40% of the total active is released;
>
> after 4 hours, from about 40-65% of the total active is released
>
> after 8 hours, from about 60-85% of the total active is released; and
>
> after 12 hours, from about 75- 85% of the total active is released

As exhibited in Figures 1-5, **cyclobenzaprine hydrochloride** is the only species of muscle relaxant shown to have the above drug release profile. As such, the instant application is not enabled for every possible muscle relaxant.

The amount of direction provided by the inventor: There is nothing in the specification that would indicate that every possible type of muscle relaxant would have the above drug release profile. Muscle relaxants comprise a very broad class of chemical species and the physiochemical properties of one species is not necessarily indicative of the physiochemical properties of another species. Guidance for preparing and using a composition comprising all the possible combinations of "muscle relaxants" is not provided in the instant specification. With respect to the instant composition, there is a substantial gap between a composition comprising **cyclobenzaprine hydrochloride** and one comprising the entire gamut of "muscle relaxants." Consequently, a burdensome amount of research would be required by one of ordinary skill in the art to bridge this gap.

The presence or absence of working examples: Five examples are included in the instant specification. Each of these examples teach compositions comprising **cyclobenzaprine hydrochloride**. Applicant fails to provide examples of compositions comprising any other muscle relaxants. As such, the practitioner would turn to trial and error experimentation in order to compose a composition comprising muscle relaxants other than **cyclobenzaprine hydrochloride** having the above drug release profile, without guidance from the specification or the prior art.

The quantity of experimentation: In the instant case, there is a substantial gap between a composition comprising cyclobenzaprine hydrochloride and one comprising any and all "muscle relaxants." As stated earlier, "muscle relaxants" comprise a huge class of compounds. Consequently, a burdensome amount of research would be required by one of ordinary skill in the art to bridge this gap

The relative skill of those in the art: the skill of one of ordinary skill in the art is very high, e.g., Ph.D. and M.D. level technology.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Vanik whose telephone number is (571) 272-3104. The examiner can normally be reached on Monday-Friday 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carlos Azpuru, can be reached at (571) 272-0588. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 1615

1/5/06

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